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FAMILY LYCEUM.

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EVENING ENTERTAINMENTS.

SIXTH EVENING.

THE inhabitants of Kamtschatka have all a certain number of dogs, which they turn loose in summer, and catch again at the beginning of winter, to avail themselves of their service. They then tie them to posts round their wretched huts, and feed them with fish either dried or putrid, taking care, however, not to give them any great quantity; because too much food would make them incapable of drawing their vehicles.—Dogs are as highly valued in Kamtschatka as horses are by us; because they are, in reality, the most useful animal for that country. Accordingly, a good dog for draught fetches from sixty to eighty roubles. If the master of the house has to go a journey, he harnesses his dogs, and off he sets. A traveller, deserving of credit, gave me the following description of this kind of equipage: 'During my residence in Kamtschatka, I learned to drive dogs in harness, which is the only way of travelling in that country. When ready to start, I got into a sledge rather longer than usual, for I could lie down at my ease, and use it at night for a bed; and to this sledge I harnessed no less than thirty-seven dogs. As our caravan consisted of thirty sledges, there were in all near three hundred dogs. We set off; and such was the speed of these animals, that in five hours we proceeded in this manner thirty-six miles. Every thing went on wonderfully well for some time; but in a fortnight the stock of fish which we had carried with us to feed our dogs was nearly exhausted.—Provisions began to fail, and many of the poor animals were starved. No sooner did a dog drop down dead, than he was instantly devoured by the others, who fought for his bones. To such extremities were they driven by hunger, that they gnawed the traces by which they were fastened to the sledges; and we had ourselves great difficulty to secure our persons from the effects of their voracity. The number of these famished beasts kept daily diminishing, till at last we had no more than a score left; this obliged our company to halt, and to send forward some of our number for assistance, which they were fortunate enough to procure.' But these are not the only dangers to which travellers are exposed in these wild regions. Sometimes a flock of famished wolves will track a sledge, and wo betide the traveller who shall be thrown upon the snow, for those voracious animals would soon devour him. Sometimes a whirlwind arises in the deserts of Siberia, and, driving before it immense volumes of snow, threatens to bury the luckless traveller beneath its light but cold and overwhelming flakes. In the environs of Baikal, and in other mountainous parts, the traveller may be suddenly lost by the fall of an avalanche, which, precipitating itself with considerable force and swiftness, destroys all it meets with. When, after a long and severe winter, the sun again appears, fresh objects of dismay present themselves. Of the sudden transitions from cold to heat, from darkness to light, the latter is most pernicious. The sun, darting upon the spotless and dazzling snow, threatens with blindness those who do not take some preparation against its powerful effects.—And, strange as it may seem too, the cold season is sometimes succeeded by so parching a heat, that the flowers droop their heads, the shrubs wither, and the trees of the forest yield to its parching effects, and shed their leaves ere it can be said they have blossomed. But these are not the most fatal effects to be dreaded from this extraordinary heat. The air itself is so inflammable, that a single inadvertent spark has been known to kindle the most frightful conflagrations in those desert regions. When this misfortune happened, people fled in every direction, and the only means of stopping its progress was by digging deep ditches in the direction the fire was taking.

Caroline.—So then, papa, nature has placed the poor Siberians between fire and ice.

Mr. Oakley.—Do not imagine from what I have said, that Siberia is without its beauties. Except in those parts which border upon the Frozen Ocean, where the soil never thaws but slightly on its surface, it presents pictures of the most enchanting beauty. During the long winter nights of this country, the moon shines with a brilliancy unknown in our climates: her disc appears prodigiously large, and seems to be suspended just over the mountain tops, or reposing upon the lofty forests: but she withdraws, and her light becomes less brilliant as the sun regains its influence in those distant regions. The scene then becomes more resplendent; the sun's rays spread in every direction, and the distant horizon assumes, at times, the appearance of a frightful conflagration. Then a beautiful verdure clothes the meadows, and the long days repay the Siberian for his tedious night gone by. All nature revives; the frozen torrent gradually assumes it native form, till at length it rushes impetuously down the mountains; the air resounds with the hum of insects; the Nomades (or wandering tribes) issue from their winter retreats; and scarcely has the sun withdrawn its beams, than Aurora announces another day.

At the feast of the Trinity, at Nertschink, the churches and the houses are decorated with branches of trees; green branches are carried by the people, and parties of pleasure are made in the fields.

At Irkutsk, festivities of the most joyous kind celebrate the feast of St. Peter and St. Paul. Fresh meat is then eaten for the first time; for from the month of October until this festival, which happens about the end of June, smoked, salted, or frozen meat, constitute the food of the inhabitants of this part of the world.

At Tobolsk, the genial season is hailed by invitations given and received to meet in the gardens, there to partake of fresh green vegetables, with bread and salt. Various liquors are made from the berries with which Siberia abounds; but fruits are a great rarity, and it is only the most wealthy part of the community who can indulge themselves occasionally with an apple or a bunch of grapes.

At the end of the summer they cut their cabbages; and, as they are the principal food of the common people, *this gathering* of cabbages is of as much importance as the vintage and harvest of other countries: all hands are at work assisting each other, either in cutting or salting them.

But we have wandered from our poor savages, to whom these pleasures, simple as they may appear to you, are totally unknown, who have no conception of any enjoyment beyond that produced by a successful bear-hunt, or a fortunate fishing excursion.

You are sufficiently well acquainted, my dears, with the nature and character of the bear, to render it unnecessary for me to give you a description of that animal, especially as you have several times seen bears alive, either at exhibitions of wild beasts, or in the public streets, but muzzled, for fear of their doing mischief. There are two kinds of bears, the black and the white. The latter, which generally inhabit the coldest regions of Europe, Greenland, Iceland, Spitzbergen, Nova Zembla, and Siberia, are extremely ferocious, particularly when pressed with hunger. They then devour whatever comes in their way, undaunted by obstacles, how great soever they may be.

Caroline.—What, do they venture to attack men?

Mr. O.—Very often; for human flesh is one of the favorite repasts of the white bear. He frequently attacks them when they have not done him the smallest injury; but still they find means to escape from him. If, for instance, you throw your glove, your hat, or anything else, upon the ground, the bear stops to examine it, and meanwhile you have time to get away. If there are several persons in company, they continue together, and all begin shouting at once with such force, that the bear runs off at full speed, affrighted with the noise. You may form some idea of the voracity of the bear, from the following adventure, which befel some Dutchmen about the end of the sixteenth century, during the expedition under the command of G. Baerens, to make discoveries in the Frozen Ocean. The severity of the cold, and contrary winds, had obliged the crew of his ship to cast anchor near a small island called Staten Island. Here they found a great number of hares, and also a sort of diamonds. One day some sailors having formed a party to explore the country, two of their number, feeling disposed to sleep, lay down on the ground, while the others went in search of diamonds; when a large famished white bear stole softly upon them, and seized one of them by the nape of the neck. The sailor, supposing it to be one of his comrades who wanted to have some sport with him, called out and desired him not to be so rough. 'A bear! a bear!' exclaimed the other, who just then awoke, and had time to escape.—The bear meanwhile tore in pieces the head of the unfortunate sailor, and licked his blood. The other seamen, apprized of the circumstance by his companion, ran to the spot, to the number of twenty, all provided with guns and pikes, and found the bear still engaged in devouring his victim. As soon as he perceived them, he rushed towards them with fury, seized another sailor, carried him off, and tore him in pieces.—Panic-struck, his comrades returned with all possible speed to their vessel. It was proposed that they should all march in a body against this voracious animal, but most of them were terrified at the danger to which they were likely to be exposed. Only three had the courage to venture to advance against the bear; these were the two pilots and the ship's steward. The first two fired, but both missed the animal; the steward then approached still closer, fired, and the ball entered the bear's head near the eye.—The creature, however, did not fall, and with tottering step continued to make off with his prey. They then went up to him, and gave him several cuts with a sabre; but still he would not loose the unfortunate sailor from his grasp. At length one of them struck him such a blow with the butt-end of his musket as brought him to the ground; on which they cut off his head, which, with the skin, they carried off in triumph.

Caroline.—Are all bears as cruel and voracious as the white bear?

Mr. O.—The black or brown bear is less voracious, nay, in some countries, he has even an aversion to flesh. In Kamtschatka, where they are very numerous, they run about the fields without doing the least injury. They show great respect for females, whom they approach like tame animals; the only rudeness of which they are ever guilty towards them, is their frequently eating the strawberries or other fruits which they have gathered in their baskets. I shall now proceed to the different ways of taking bears, some of which are exceedingly ingenious.

The most common method is to lay in their way a pot of honey mixed with brandy; for you must know that there is nothing which the bear is so fond of as honey, and that he would suffer himself to be killed rather than leave it. This beverage intoxicates him, and he may then be taken with ease. In North America, the hunter looks for them in hollow trees, to which they retire with their young. He sets fire to the tree, and when they run out to escape, he fires at and kills them. The natives of Lapland, who still make use of bows and arrows, catch bears in a different manner.—When their dogs have discovered the retreat of a bear, they lay down their bow at the entrance; when the animal dares not leave it, but remains quietly in his den. Meanwhile the Laplander collects all the branches of trees and pieces of wood that he can find, takes his bow softly away, and gradually closes up the entrance of the den in such a manner as to leave only a hole for the bear to put his head through. After this he teases and torments the bear, till the enraged animal rises and thrusts out his head in quest of his enemy. This is just what the hunter wants; for he instantly knocks him on the head with a hatchet, which he keeps in readiness for the purpose, and kills him.

In Poland, they have a method of taking the bear which differs from all the preceding. The bees, which are very common in that country, deposit their honey in hollow trees; and the bears, who, as I have before observed, are exceedingly fond of it, climb up those about which they observe the bees flying. This avidity of the bear for honey, has given rise to a singular contrivance to cure him of it. In a tree in which is a hive, and just over the latter, is suspended a heavy hammer. The bear, allured by the honey, climbs the tree, and tries to push aside with his head the hammer which impedes his predatory design; but the instrument is placed in such a manner that, when it is removed, as the animal imagines, it falls upon his head, and still remains over the hive.—This irritates the bear; he pushes away the hammer with still greater force, and immediately receives a more violent blow than before. He again strives to get rid of the hammer; but the force of its strokes increases with his efforts, till at length he drops from the tree, and is besides lacerated with the sharp stakes planted in the ground underneath the tree. Here he is caught and despatched, if not already quite dead.

In Asiatic Russia, where every father of a family possesses a great number of hives, they are more attentive to prevent these gormandizers of honey from rifling them of their contents. The peasants merely place in the bear's way a cord with a running noose tied to a large heavy piece of wood. The animal thrusts his head through the noose, finds himself caught, and to get rid of the weight that is fastened about his neck, carries it to the top of a hill, with the intention of throwing it down; but the log drags him along with it, and makes him tumble over and over to the bottom; which enrages the animal to such a degree, that he clambers up again to repeat the attempt, by which he gains nothing but another tumble; and at last becomes so exhausted with his efforts to deliver himself from this kind of yoke, that he drops down dead.

I told you, my dears, that these animals are very greedy of honey, and climb trees to get at that which is there deposited by the bees. The inhabitants of those parts go at certain seasons of the year to collect this honey, and perceive, to their no small vexation, the ravages made by the bears in their property, and frequently their only resource. They are therefore continually laying snares for these enemies. I will describe one of their traps, which is very ingenious, very common, and seldom fails to answer the purpose for which it is intended.

Having fixed upon a tree in which there is a hive, they fasten to it very firmly, and near to the hive, a curved pole of considerable length, at one end of which is suspended a very heavy stone, designed to serve as a counterpoise. The other end is inclined, and likewise fastened, but more slightly, to the tree; at this end, opposite to the hive, is also suspended a square board in the form of scales. The greedy animal, on perceiving the hive, immediately climbs the tree, and seeing the board near the hive, he rejoices at the prospect of so commodious a station for plundering it of the honey. But scarcely has he stepped upon it, when, to his astonishment, his weight breaks the cord which tied that end of the pole to the tree. The stone suspended at the other, then sinks from its superior weight, and hoists into the air the board on which stands the unfortunate robber; who finding himself thus tricked, separated from his beloved hive, and suspended in the air without the possibility of retreat, begins to roar with such vehemence as to make the whole forest resound. This frightful noise is charming music to the ears of the hunter. He runs to the spot, and discharges arrows at the animal, who strives to avoid them.—The movements which he makes for this purpose, cause him at length to tumble upon the stakes planted in the earth, that he may not get away, and here inevitable death awaits him.

In the peninsula of Kamtschatka, there are men who will singly vanquish a bear, which several hunters in company can scarcely do. They have no weapon but a knife and a piece of iron ground very sharp at both ends, and tied to a thong, which the hunter fastens round his right arm. Thus equipped, he advances towards the bear, who, when he sees him, rises up on his hinder legs, and opens his mouth. At this moment, his enemy very dexterously thrusts into it his right hand with the sharpened iron, which not only prevents the bear from shutting his mouth, but puts him to such extreme pain, that the hunter may lead him whithersoever he pleases.

Gustavus.—The natives of that country must hold these dexterous hunters in high estimation.

Mr. O.—Certainly; the man who kills a bear, is considered by them as a hero, and everybody strives to gain his friendship.—There are some who are so expert at this business, that in autumn they will go into the thickest parts of the forest, and when they perceive a very fat bear, will fall upon him, throw him down, muzzle and drive him with a cudgel into the midst of their

hamlet. One of their chiefs usually fixes the day for the grand bear hunting. The hunters assemble, and make great preparations for eight successive days. They sing and take a great deal of exercise to fatigue themselves, that, according to their superstitious notions, they may while asleep discover the place where they shall meet with the best sport. At the conclusion of these eight days they have a grand entertainment, at which the chief relates to the hunters the feats achieved in former expeditions.—At length they arm themselves as if they were going to war, and all the hunters set out amid the acclamations of the whole village. After fixing upon the place which is to be the theatre of their operations, all the hunters form a large circle, in the middle of which the bear is enclosed. The circle they contract by degrees, so that the bear is almost always taken.

Eliza.—Does it not sometimes happen that the bear escapes?

Mr. O.—Certainly; but these savage people can run as fast as the bear, nay, sometimes they outstrip him. When a hunter has killed one of these animals, he puts the bowl of his tobacco-pipe between his teeth, and blows the smoke into the mouth and throat of the animal, with whose spirit he imagines that he reconciles himself by so doing. He then cuts out the string from beneath the bear's tongue, and keeps it till the conclusion of the hunting. The other savages do the same; and when it is over, they kindle in the middle of their village a large fire, into which they throw all the strings they have cut out; and if these crackle a good deal in the fire, they rejoice, under the idea that the spirits of the bears are reconciled with them; if not, they are dejected, and predict that they shall be unsuccessful in hunting the ensuing year. On the return of the hunters, they are received at home with songs of joy, and they themselves sing without intermission; after which they provide a grand feast, consisting of the largest bears roasted whole. According to their ideas, if they would not irritate the spirits of these animals, not the smallest bit must be left. You may easily suppose that the next day the guests feel the effects of this entertainment.

Caroline.—Then these savages make a practice of eating bear's flesh?

Mr. O.—Not only the savages, but likewise the other people of the north, in whose country bears abound, as the Finlanders, the Poles, and the Russians. The feet are the most delicate part of the bear: I have eaten them myself in some of the first houses in Russia, and I can assure you they are delicious. The head is also considered a dainty, and is served up at the tables of the most opulent people. The Polish and Russian peasants are fond of the flesh also of the bear, and the ham of a fine fat bear never fails to form part of their wedding dinners. But to return to the hunting of the bear: I ought to inform you, that in Lapland, this sport, when it is general, is looked upon as the greatest festival in the year, and he who kills one of these animals is reputed an extraordinary man. In autumn, the Laplanders go in quest of the bears; as soon as one of them has discovered several of these beasts in their dens, he announces the good news to his relatives and friends, and invites them to the chase. When the favorable time for it has arrived, the chief of the hunters assembles all his men, and applies to the greatest sorcerer among them to beat his drum, to discover whether their expedition will be successful. He who has discovered the retreat of the bear, heads the company, carrying a long stick with a large copper ring tied to the end of it as a mark of dignity. Next to him goes the magician with his drum, then the commander of the troop, and after him all the others. If they find a bear in his den, they kill him with their pikes or guns, without resorting to any of the stratagems used, as I have told you, by other nations. After this expedition, the captain sings a song of victory, and all his followers form the chorus. In this manner they carry home the bear, and are met by the women, who greet them with songs of praise for having killed their enemy. They then retire, because they are not allowed to eat with the men. The bear is skinned, and his flesh is dressed for the feast. The magician is present to allot to each his respective portion. The captain first cuts the bear in two parts, one for the men, and the other for the women. Two persons are deputed to deliver to the latter their half of the beast. They execute their commission, at the same time singing these words:—'Here are men come from Sweden and Poland, from England and France, to bring you presents.'

Gustavus.—But why do they name those countries, since the women must know that they are not only their own countrymen, but even their acquaintance?

Mr. O.—They think that it heightens the value of their presents if they mention countries which they consider as the most remote from them. The women are pleased with this proceeding, and, singing in like manner, they reply:—'Approach, ye men come from Sweden and Poland, from England and France, approach, that we may adorn your heads with bunches of red wool.' The deputies, proud of this mark of esteem conferred by the women, return with this decoration to their companions.

This ceremony of the Laplanders highly amused Mr. Oakley's children. They each made remarks on these absurd customs, and in a few minutes Mr. Oakley thus continued:—

Having told you so much about the hunting of the bear, I shall conclude for this evening with a few words concerning the profit derived from that animal. You have already heard that among several nations his flesh is used for food: but the most valuable part of the bear is undoubtedly the skin. With this are made beds and bedding, caps, gloves, and the harness for the dogs that draw the sledges; also the soles of shoes, which possess the advantage of not slipping upon ice. The fat furnishes pomatum, oil, and is even used in medicine. The intestines, when washed and cleaned, supply the fair sex in Kamtschatka with the material for a kind of mask, which they put over their faces to prevent the sun from spoiling their complexion; the women of that country have in consequence an extremely fair and delicate skin. These same intestines furnish the Cossacks with a very clear and transparent substitute for glass for their windows. The bones of the bear's head are considered as ornaments to the huts of the savages, and his hairy skin is in general use for clothing among the Russians, and other nations of the north. A black bear-skin pelisse is an indispensable part of the wardrobe of a man of fashion at Petersburg or Moscow.

Mothers' Lyceums.

Two books have recently been published, to aid mothers in their high and holy charge. One from the pen of Mr. Hall, of the Teachers' Seminary, Andover; the other, from Rev. Mr. Abbot, of Worcester. Both deserve to be the daily companions of every mother. Besides having these books on the tables and in the hands of every lady whom her Creator has made responsible for the education and eternal happiness of an immortal being, she would be greatly aided in her interesting and solemn duties, by frequent converse with others under the same responsibility. And we cannot conceive of a step more easily or more readily taken, or one which would be of deeper interest or of more important results, than for mothers, in the same neighborhood, to meet once a week, and read from these two volumes, and from the 'Mother's Magazine,' and converse upon their interests, and the best management of those deathless spirits which God has committed to their charge.

We hope the time is not distant, when a Lyceum will be in successful operation in every town and village in the Union, and when a department will be provided in each for the special benefit of mothers—when every mother in the American Republic will be an interested and active member of a Lyceum.

Laws of Nature.

The general laws of nature are divisible, into, those of, 1st. *Physics* often called *Natural Philosophy*, 2d. of *Chemistry*, 3d. of *Life*, commonly called *Physiology*, and, 4th. of *Mind*. Now these four classes may be said to form the pyramid of Science, of which Physics is the base, while the others constitute succeeding layers in the order now mentioned; the whole having certain mutual relations and dependencies well figured by the parts of a pyramid. We must describe them more particularly to shew these relations.

Physics.—The laws of Physics govern every phenomenon of nature in which there is any sensible change of place, being alone concerned in the greater part of all the phenomena, and regulating the rest which originate from chemical action, and from the action of life.—The great physical truths are now reduced to four, and are referred to by the words *atom*, *attraction*, *repulsion*, and *inertia*. It gives an astonishing, but true idea of the nature and importance of methodical Science, to be told that a man, who understands these words, viz. how the atoms of matter by mutual attraction approach and cling together to form masses, which are solid, liquid, or æriform, according to the quantity of repulsion of heat among them, and which owing to their inertia, or stubbornness, gain and lose motion, in exact proportion to the force of attraction or repulsion acting on them,—understands the greater part of the phenomena of nature; but such is the fact. Solid bodies existing in conformity with these truths, exhibit all the phenomena of mechanics; liquids exhibit those of Hydrostatics and Hydraulics; Airs, those Pneumatics; and so forth, as seen in the table of heads given below. And the whole of this volume is merely a list of the most interesting physical phenomena, arranged in classes under these heads.

Chemistry.—Had there been only one kind of substance or matter in the universe, the laws of Physics would have explained all the phenomena; but there are iron, and sulphur, and charcoal, and about fifty others, which, to the present state of science, appear essentially distinct. Now these, when taken singly, obey the laws of Physics; but when placed in contact under certain circumstances, they exhibit a new order of phenomena. Iron and sulphur, for instance brought together and heated, disappear as individuals, and unite into a new yellow metallic mass which in most of its properties is unlike to either:—under other new circumstances, the two substances, will again separate, and assume their original forms. Such changes are called chemical, (from the Arabic word signifying to burn,) but during them the substances are not withdrawn from the influence of the physical laws,—their weight inertia, for instance, is not altered; and indeed the phenomenon is merely a modification of general attraction and repulsion. Many chemical changes besides are only the beginnings of purely physical changes as when the new chemical arrangement produced by heat among the intimate atoms of gun powder, causes the physical motion of the sudden expansion or explosion. And all the manipulations of Chemistry, as the transferring of gases from vessel to vessel, the weighing of bodies, pounding, grinding, &c. are directed by Physics alone. Chemistry, then, is truly, as figured above, a modification of, or superstructure on Physics, and cannot be understood or practiced by a personwho is ignorant of Physics.–The chief departments of study involving the consideration of Chemical in conjunction with Physical laws, are enumerated in the table below, under the head of Chemistry.

Life.—The most complicated state in which matter exists, is where, under the influence of life, it forms bodies with a curious internal structure of tubes and cavities, in which fluids are moving and producing incessant internal changes.—These are called Organized Bodies, because of the various organs which they contain; and they form two remarkable classes, the individuals of one of which, are fixed to the soil, and are called Vegetables; and of the other, are endowed with power of locomotion, and are called Animals. The phenomena of growth, decay, death, sensation, self-motion and many other belong to life, but from occurring in material structures which subsist in obedience to the laws of Physics and chemistry, the life is truly a superstructure on the other two, and cannot be studied independently of them. Indeed the greater part of the phenomena of organic life are merely chemical and physical phenomena modified by an additional principle. The phenomena of life, from thus involving generally the agency of all the sets of laws, are by far the most complex of any; and the discovery or detection of the peculiar laws of life, although these are fixed as the laws of physics or chemistry, has been very slow, and is as yet far from being completed. We cannot as yet explain, why the individuals of animal and vegetable classes live only for a limited time; why offspring inherit peculiarities of health or disease from the parents; why the various species continue distinct, &c. But many powerful minds of the present day, particularly among medical men, whom it chiefly concerns, are directed to the subject, and important results may be looked for. A vast number of facts have now been carefully observed and recorded, and to a certain degree classified; and perhaps some master genius may soon arise, to shew that a very few simple truths connect the whole, as Newton shewed with respect to the inferior classifications in physics, when he detected the general laws of inertia and gravity, the science of Life is divided into animal and vegetable Physiology.

Mind.—The most important part of all science, is the knowledge which man has obtained of the laws governing the operations of his own mind. This department stands eminently distinct from the others, on several accounts. Unlike that of organic life, which could not be understood until physics and chemistry had been previously investigated, this attained extraordinary perfection in a very early age, when the others had scarcely begun to exist. In proof of this assertion, we need only refer to the writings of the Greek philosophers. The most brilliant discoveries, however, were reserved for the moderns, as will occur to many readers, on perusing in the table below, the several divisions of the subject, and recollecting the honored names which are now associated with each. It is truly admirable to see the modern analysis, deducing from a few simple laws of mind all the subordinate departments, just as it deduces mechanics, hydrostatics, pneumatics, &c. from the laws of physics. It is to be remarked here, that the laws of mind which man can discover by reason, are not laws of independent mind, but of mind in connection with body, and influenced by the bodily condition. It has been believed by many, that the nature of mind separate from body, is to be at once all-knowing and intelligent. But mind connected with body can only acquire knowledge slowly, through the bodily organs of sense, and more or less perfectly, according as these organs and the central brain are perfect. A human being born blind and deaf, and therefore remaining dumb, as in the noted case of the boy Mitchell, grows up closely to resemble an automaton; and an originally mis-shapen or deficient brain causes idiocy for life. Childhood, maturity, dotage, which have such differences of mental faculty; and as no two bodies, so no two minds, in their external manifestation, are quite alike. Fever or a blow on the head will instantly change the most gifted individual into a maniac, causing the lips of virgin innocence to utter revolting obscenity, and those of pure religion to speak horrible blasphemy; and most cases of madness and eccentricity can now be traced to a peculiar state of the brain. Man has a conviction, inseparable from his very being, that his soul is something distinct from his body, and awaiting other destinies: but independently of Revelation, as is shown in the laborious reasonings of the ancient heathen philosophers, his notions on the subject remain very vague.

Quantity.—To express most of the facts and laws of physics, chemistry and life, terms of quantity are required, as when we speak of the magnitude of a body, or say, that the force of attraction between two bodies diminishes as their distance increases. Hence arises the necessity of having a set of fixed measures or standards, with which to compare all other quantities. Such measures have been adopted: and they are, for numbers, the fingers. or fives and tens; for length, the human foot, cubic, pace, &c; and lately the second's pendulum and the French mètre (taken from the magnitude of our globe;) for surfaces, the simplest forms of circle, square, triangle, &c.; and for solid bulk, the corresponding simple solids of globe, cube, pyramid, cone, &c. The rules for applying these standards to all possible cases and for comparing all kinds of quantities with each other, constitute a body of science, called the Science of Quantity, or the Mathematics. It may be considered as a fifth and subsidiary department of human science. Its chief sub-divisions are noted in the table below.

Supposing description of particulars, or Natural History to be studied along with the different arts of the System of Science sketched in the table, there will be included the whole knowledge of the universe which man can acquire by the exercise of his own powers; that is to say, which he can acquire independently of a supernatural Revelation. And all his arts are founded on this knowledge—some of them on the single part of Physics, as that of the machinist, architect, mariner, carpenter, &c.; some on Chemistry, which includes Physics, as that of the miner, glassmaker, dyer, brewer, &c.; and some on Physiology which includes all the rest, as that of the scientific gardener or botonist agriculturist, zoologist, &c. The business of teachers of all kinds and of governors, advocates, linguists, &c. &c., respects chiefly the science of mind.

SCIENTIFIC TABLE.

Table of the Science of Chemistry.

Simple Substances,	Brewing,
Mineralogy,	Dyeing,
Geology,	Tanning,
Pharmacy,	&c.

Table of the Science of Quantity.

Arithmetic, Algebra,
Geometry, &c.

Cooperation of Schools.

The progress which has been made in the correspondence and cooperation of schools in most of the states, since it was proposed in the Lyceum, a few months since, is of a most gratifying character.—When such a correspondence and exchanges become general and systematized through the Union, which must be very soon, almost any object which may be desired may be effected for the cause of Education. Almost an instantaneous vibration may be produced from state to state, from school to school, and from mind to mind.—Through the medium of some common channel of correspondence, every school in the Union may become acquainted with all the rest, and in such a way as to animate and strengthen each other.

One of the most important advantages that may be expected to arise, and has already arisen to a very good degree, is the cultivation of the heart. Let any school in the United States hold a correspondence with any other, even in the most distant section, and a kind regard and an affection would be the immediate consequence. If any two pupils of these schools should ever meet, they would recognize each other as friends, the moment they were known.

These practical, experimental lessons on the cultivation and enlargement of the heart, can never fail to take effect wherever they are enjoyed; and they can be enjoyed by every school in the Union, whose teacher is disposed to try the experiment.

LYCEUMS.

Boston Mutual Lyceum.

The colored people of Boston have formed a Society for Mutual Improvement, under the above title. They are about forming classes for improvement in reading, writing, arithmetic, &c. They have also entered upon measures to procure a library, cabinet of natural history, and a room or rooms for their cabinet, meetings, &c.

The Lyceum of colored children noticed two weeks since, has greatly increased in its numbers, and has already produced results truly astonishing. They have already collected specimens of minerals, and other natural productions, and what is still more interesting, of their own ingenuity and improvement. It has also added to the number and improvement of the pupils in the public primary schools for colored children.

Why may not white children do as much?

Mechanics' Lyceums.

The Zainsville (O.) Lyceum, has a department for Mechanics, who have separate meetings for their special benefit.

The Mechanics' Lyceum of Boston, carries out into practice the principle of mutual and self improvement, in a most happy manner.

The Mechanic Apprentices' Lyceum, of Boston, is probably the most complete in all its parts of any Lyceum in the city.

Boston Wesleyan Lyceum.

The friends of education connected with the Methodist denomination, have organized a Lyceum, with a fair promise of extensive usefulness. Measures are in progress to organize several departments of the general institution, and to form classes upon various subjects. It is intended to have a department for ladies, one for mothers, also for seamen and children. It is also proposed to have the departments divided into classes or committees, for the purpose of pursuing such subjects as may suit their age, acquirements, pursuits and wishes.

The spirit manifested at the meetings which have been held for the purpose of forming the Lyceum, indicates *Christian Benevolence* as one of the prominent features and objects of its operations.

We hope to be able, in our next, to give the constitution and by-laws of the society.

Musical Lyceum.

A Society under the above title, is in operation in Cambridge.

METEOROLOGICAL DIARY.....MAY, 1833.

OBSERVATIONS 8 A. M.; 2 AND 6 P. M.

Date.	Av'ge.	Therm'r.	Winds.	Weather.
1	69	66 72 70	SE	Clear.
2	72	65 78 73	SW E SE	Clear.
3	74	70 78 74	SW E NE	Clear.
4	74	72 76 73	NE	Cloudy.
5	74	74 76 73	SE NE	Clear.
6	74	70 77 74	NE	Clear.
7	74	72 76 74	NE	Cloudy.
8	73	73 75 72	NE	Do. Rain.
9	74	72 76 74	NW NE	Cloudy.
10	76	73 78 76	NE SE	Cloudy.
11	76	76 79 75	SE	Showery.
12	76	74 77 76	SE	Rain, thund.
13	76	75 79 74	SE	Thund. rain.
14	76	72 80 76	SW	Cy. dist. thr.
15	78	73 78 74	SW SE	Cloudy.
16	79	78 82 77	S SE	Cloudy, rain.
17	80	77 84 78	SE	Do.
18	79	78 82 78	NE	Do.
19	79	78 84 76	SW SE	Do. do.
20	80	78 85 77	NW SW SE	Clear.
21	79	76 82 80	SW	Cy. thunder.
22	80	78 82 80	NW E NE	Cloudy.
23	81	80 84 80	SE	Cloudy.
24	79	76 82 80	NE SW	Clear.
25	80	78 82 80	SW SE	Cloudy, rn.
26	80	78 82 80	SW SE	Clear.
27	83	78 87 85	SW SE	Clear.
28	85	80 88 86	SW SE	Clear.
29	86	82 89 86	SW	Clear.
30	81	80 83 80	NW NE	Cy. thunder.
31	83	80 87 82	SE SW NE	Cy. th'r. r'n.

REMARKS.

1. These Observations have been taken three times a day, viz.: at 8 A M; 2 and 6 P M.

2. Mean of three daily Observations for the month, 79°; 10° warmer than April. Max. 86° on the 9th; Min. 69 on the 1st.

3. Ther. Ex. at 8 o'clock, A M. Max. 82° on the 29th; Min. 65 on the 2d; Mean 68.

4. Ther. Ex. at 2 P M. Max. 89° on the 29th; Min. 72 on the 1st; Mean 81.

5. Ther. Ex. at 6 P M. Max. 86° on the 28th and 29th; Min. 70 on the 1st; Mean 77.

6. There have been 10 rains during the month of May, 6 accompanied with thunder. Very little rain during May.

7. Winds have been SE 11 days; NE 11; NW 2; SW 7. The weather has been clear 12 days; cloudy, 13; variable, 3.

8. The month has been warm and dry; the city healthy—no prevailing disease.

Abstract of Meteorological Observations, taken at Savannah, Geo., (Lat. 32° 8′ North, Lon. 4° 8′ West, from Washington City,) from June 1st, 1832, to June 1st, 1833.

June. Clear 20 days; cloudy 6; rainy 4. Thermometer, Max. 92° on the 15th and 16th; Min. 73 on the 10th and 21st; Mean 81. City unusually healthy.

July. Rainy 9 days; clear 18; cloudy 4. Ther. Max. 94° on the 21st; Min. 74 on the 14th; Mean 84 Prevailing wind SE. The city free from disease, and never more healthy.

August. Clear 2 days; cloudy 4; rainy 25.—Ther. Max. 90° on the 11th; Min. 77 on the 29th; Mean 82. Prevailing wind NE. The city very healthy; no sickness.

September. Rainy 12 days; clear 13; cloudy 5. Ther. Max. 90o on the 5th; Min. 66 on the 14th and 15th; Mean 77. Prevailing wind S'ly. The month healthy; no prevailing epidemic.

October. Clear 12 days; rainy 6; cloudy 13.—Ther. Max. 84° on the 11th, 12th, and 13th; Min. 52 on the 3d and 25th, Mean 71. Prevailing winds NE and E. The city healthy. First frost this season, on the evenings of the 24th and 25th.

November. Clear 12 days; rainy 6; cloudy 12. Ther. Max. 87° on the 6th; Min. 44 on the 24th; Mean 64. Prevailing winds NW and W. The city and surrounding country healthy. Vegetation still in verdure.

December. Cloudy 14 days; rainy 10; clear 7. Ther. Max. 72° on the 1st and 27th; Min. 30 on the 22d; Mean 54. Uninterrupted health. Sleet and snow on the evening of the 23d.

January. 1833. Cloudy 11 days; variable 8; rainy 6; clear 6. Ther. Max. 72° on the 2d and 5th; Min. 20 on the 11th; Mean 56. On the morning of the 10th a little snow. Prevailing winds SW and S. Usual health at this season of the year.

February. Cloudy 8 days; variable 6 with slight rains; clear 14. Two weeks this month without rain. Ther. Max. 78° on the 19th; Min. 38 on the 8th; Mean 59. Weather unusually pleasant; the health of the city good.

March. Cloudy 18 days; variable 2; clear 11. 7 slight rains. Ther. Max. 80° on the 1st; Min 40 on the 2d and 3d; Mean 62. The month mild and pleasant. Prevailing winds SE and S. The health of the city good.

April. Clear 10 days; cloudy 10; variable 7; rainy 3. 14 rains during the month. Ther. Max 84° on the 25th; Min. 57 on the 1st; Mean 69. The month warm and wet. Prevailing wind NNW. The city healthy.

May. Cloudy 16 days; clear 12; variable 3. 10 light rains. Ther. Max. 89° on the 29th; Min. 65 on the 2d; Mean 79. The month warm and dry. Prevailing winds S'ly. and E'ly. The city free from all disease.

Summary.

There have been 137 clear days, 121 cloudy, 31 rainy, 36 variable. Mean average of the Thermometer, from three daily observations, for the three summer months, 82°; for the three fall months, 71°; for the three winter months 56°; for the three spring months 70°. Winds: NW and W 81 days; NE and E 112; SE and E 85; SW and W 87.—The greatest quantity of rain fell in August, 1832, and April, 1833. There was more rain in April, 1833, than during the three winter months.

Distinguished health has been enjoyed during the last twelve months in this city. No prevailing epidemic of any description. Mean temperature of the thermometer for the year, 69° 83. July, 1832, the warmest month; ther. av. 84. December, 1832, the coldest; ther. av. 54. Warmest day July 21, 1832, 90 deg.; coldest December 22d, 1832, 30 deg. The month of August, 1832, the mean average of the thermometer varied from 80 degrees, the lowest point at any time, to 85 degrees, the highest: 2 days the mercury stood at 80 degrees; 8 days at 81; 7 days at 82; 9 days at 83; 2 days at 84; and 3 days at 85. This month was very wet, and very healthy. Wind Easterly.

W. H. W.

Chatham Academy, Savannah, Geo., June 8, 1833.

A Good Example.

The value of the communications below, from our valued correspondent Dr. Brown, and especially the lecture by his young but skilful experimenter, can hardly be overrated for the value of both the table and the lecture, with the gratifying intelligence accompanying them, as enriching our columns; but as examples worthy of general imitation, they have an importance which cannot be calculated.

When it is seen with how much success the young ladies of Georgia not only study, but experiment upon the sciences, we hope the ladies of Massachusetts, and of all the states, will move in the field of science with increased interest and animation—that all will follow so good an example.

Scottsborough, June 13th, 1833.

Mr. Holbrook:

I send you a Meteorological Table for the latter part of May and the first part of June.

Our young ladies are making up an Herbarium, and we have gathered some minerals, including gold ore, which we will send to your address, as soon as we can get a conveyance to Savannah.

Your's, truly,

R. C. Brown.

TABLE OF METEOROLOGY.

Scottsborough Institute, lat. 33 0 10 N; W lon. 6 19.

Day & Month.	Thermometer. 8 AM	2 PM	6 PM	Winds.	Observations.
May.					
9	70	74	75	NE	Cloudy, rain.
10	71	77	73	ENE	Rain & thunder.
11	72	71	72	E	Cy. rain, thund.
12	70	76	72	E	Do. do. do.
13	70	75	74	SSE	Broken clds. rn.
14	69	74	75	E to S	Do. do. do.
15	69	76	74	S to NW	Do. & pleasant.
16	72	80	80	NNW	Clear and do.
17	71	81	82	N	Clear.
18	75	83	84	NNW	Clear.
19	76	84	84	S	Clear, cloudy.
20	74	82	82	SSW	Thunder, rain.
21	72	76	79	SSW	Do. do.
22	71	75	73	SSE	Do. do.
23	69	74	72	E	Rain.
24		76	79	E	Pleas't show'rs.
25	75	82	86	NNW	Clear.
26	76	84	87	NNW	Clear.
27	77	91	88	SSW	Clear.
28	79	87	86	"	Clear.
29		89	81	"	Rain, thunder.
30	72	80	80	NNW	Clear.
31		81	84	E to SW	Thunder, rain.
June					
1	79	86	88	SSE	Clear.
2	78	88	88	SW	Clear.
3	80	87	86	SW	Cloudy, pls'nt.
4	78	87	89	SSW	Clear. }
5	79	88	88	SW	Clear. } Very hot.
6	80	88	89	SE	Clear. }
7	81	89	91	SW	Do.; a breeze.
8	83	90	90	SW	Pls'nt.; thund.

N. B.—Our Spring has been unusually wet and cold. Vegetation, especially the cotton, has been retarded in its growth. The days are now very hot, and the sun's ray unpleasant; but nothing can surpass the beauty and refreshing influence of the morning, from 5 to 8: the plants revived by the night's dew—the serene sky—the delightful groves.—make the country of Georgia truly a paradise, every morning and evening. We are in one of the most healthy places on earth.

I send you a copy of a Lecture delivered by one of my pupils; it serves to show what interest young ladies may be induced to take in science. My classes deliver lectures, and illustrate them with experiments, and I find it a valuable impetus to improvement. Some of my pupils are preparing descriptions of plants and birds for your paper. I shall not *correct* or *alter*, or aid the papers sent by my pupils; you shall have them just as they come to me: they better serve as specimens of the talent of our Georgia young ladies.

R. C. B.

NATURAL PHILOSOPHY.

LECTURE ON FLUIDS.

By Miss L. W. *of the Scottsborough Institute, Geo.*

As two sisters together dwell, and by their sympathy and converse sweeten the joys and lessen the miseries of human life, so do Philosophy and Chemistry, hand in hand, traverse creation and each assist the other in her researches. The most common and rare substances alike they scrutinize to interest their votaries. The clouds supply us with rain; the rivers of the earth with many conveniences,—for deprived of them, the various advantages of navigation would be no more. 'The enlivening breath of morn,' and the evening breeze, are calculated to refresh the weary travellers. Chemistry, with her magic wand, touches the air and water, and they are resolved into their constituent elements. Philosophy speaks, and obedient to her call, they exhibit their external properties. The operations of Chemistry have often been unfolded to you.

Having had a brief interview with Philosophy, she has made it my province this evening, to bring before my fellow pupils, the mechanical properties of fluids as displayed in the operation of the Forcing pump.

Here is a model of a forcing pump; it is intended only for illustration; the dimensions are therefore small. It consists of two glass tubes. The one into which the water is conducted immediately from the reservoir, is fitted with a piston, which makes it air tight. A piston is a kind of box, either with, or without a valve. A valve is something like a door, and moves to and fro. It is made of leather, or some substance, through the pores of which, a fluid cannot escape. There is a valve at the top of the small tube, which conducts the water from the reservoir, and another into the tube through which the water lastly passes. The air presses in three directions. The lateral and upward pressures are caused by the downward; and that by gravity. It is, therefore, the greatest when I exhaust the air from this tube by working the piston. You may perceive that the water rises in it, and is forced to ascend through the other tube, into the air. The downward pressure of the atmosphere on the water in the tube being removed, the pressure of that on the water in the reservoir causes a column to rise through the valve, which closing, will not permit it to descend. I then force the piston down; as it has no valve, the water cannot escape through it; and therefore, it must change its direction and proceed through the other tube, passing through it as the valve opens. Its downward pressure closes the valve.

Impenetrability is an inherent property of matter, and as the body of water increases, it cannot all remain in the tube, and therefore finds vent at the top. For this purpose are the orifices designed. Upon their dimensions and variety, the number and size of the columns depend. It is on the principle of the forcing pump, that the fire engine is constructed. The forcing pump has an advantage over the suction pump; for in the latter, the water cannot be raised higher than thirty-two feet, without a double set of valves; while in the former, it may be made to ascend to almost any height. Let nations differ as they may, they all confess (if not by words, by actions) that water is both a luxury and convenience. It is a component part of their most precious gems; it is an ingredient of their most savory dishes; it is their beverage when heat overpowers them; when the merciless flames threaten them with devastation and death, it snatches them from ruin. Still, the mere possession of it, would be valueless, were it not applied to the purposes for which it was designed. So it is with knowledge. We might be as learned as a Byron, as literary as a Pliny, as well instructed as a Terecellus, as scientific as a Hervey, still, if we applied our information to no useful purpose, if we did not partake of its viands, or by removing the pressure of *Indolence*, and applying the piston of Perseverance, cause our researches to ascend into boundless space, and descending, extinguish the destructive flame which ignorance kindles; our knowledge will be of no avail.

Lectures for Schools.

A munificent donation from the late Mr. Wadsworth, of Genesee, N. Y. has laid the foundation for a most important improvement in common primary education. He left five thousand dollars to be appropriated to supplying *common schools* with familiar practical lectures, calculated at once to interest the feelings, enlighten the minds, and strengthen the hands of the five hundred thousand children now in the State of N. York, and of this still more numerous successions.

If they do nothing more than to break the spell which at present hangs round most of our school houses, and shuts from them every ray of light, and turn the attention of teachers and pupils from the very small circle in which, like the horse in the cider-mill, they travel from month to month and year to year, they will bestow an incalculable blessing upon the rising generation and the world.

Literary Dignity.

We are glad that our 'oldest College' was able to sustain its high dignity in view of the chief magistrate of our nation, by finding several of its members who were able to address him in Latin. We conclude that the mass of learning contained in L. L. D. which was transferred upon our President by a look and a nod, enabled him to give his reply in the same language.

NATURAL HISTORY.

CONVERSATION V.

'UNCLE PHILIP, as the day is fine, instead of sitting here, will you walk with us, this morning?'

'Yes, boys; let me get my cane and hat, and we will take a ramble; perhaps we may see something, if we will use our eyes. Where do you wish to go?'

'Oh, we do not care much, if you are with us, which way we walk; any course will be pleasant.'

'Come on, then; we will cross the river, and go down on the other side beyond the old mill, where you found the wasp's paper. And now, such of you as will, may keep a look-out for curious things, while the rest of us will talk together.—Boys, do any of you know Tom Smith?'

'Know him! Why, Uncle Philip, everybody in this part of the country knows him; he is such a shocking drunkard, and swears so horribly, that nobody can forget him; and what makes it worse, he is an old man, too. His hair is almost as white as yours, Uncle Philip.'

'Yes; he is just about my age. We were both born here, and I have known him ever since we were boys; and when we played together as children, over this very field which we are now crossing, or caught fish in the river down yonder by the rocks, there was not a more decent, well-behaved, handsome boy among us than was Tom Smith. Poor Tom lost his father when he was about twelve years old, and his mother, having no other child, indulged him, until he was sent to the city to go into a store. But Tom then, boys, had good principles; he neither swore nor got drunk. In a little time he fell into bad company, and they led him astray by degrees. He was so good-natured (as they call it,) boys, that he had never the firmness to say *no* to the proposals of his companions. He went with them to places of amusement; and instead of spending his evenings in his own room, reading, he was at the theatre, or dancing in some place, or at supper with his young companions; and finally he began to play cards and billiards with them; while the inside of the church was a place which he never saw. He was cheated by his companions; and too honest he was then not to pay what he lost by gaming: he wrote to his poor mother, and told her the truth, as to his losses, and she sent him money to pay his debts, and told him to come home. He did come home; and even after all that had happened, poor Tom might have been respectable and happy; for his friends were all willing to forget the past, and encourage him for the future. For a time he went on pretty well, and married an affectionate and good young woman, and his prospects were bright enough: but one thing, boys—one single thing, ruined his comfort forever. In the city he had learned to *drink strong liquors*.

'I remember, too, soon after he came home and married, that a man was hung not far from here for murdering his wife. The man was a drunkard, though he was quite sober when he killed the poor woman; and drunkenness had hardened his heart, I have no doubt, as it will the heart of any man. Tom was talking to me about that man, and I remember he said then that when a man *began* to drink, he could never say where it would end, nor what he would do; 'therefore,' said Tom, 'beware of the *first* drink.' But Tom, though he talked like a Christian and a man about it, did not act like one: for it was not long before he began to follow his bad habit, and he soon killed his poor mother; for she died of grief and sorrow, I think. His excellent wife speedily followed her to the grave; and Tom Smith left the village, a perfect vagabond, whom no one cared for. Where he went, or what he did for a long time, no person here knows. I went to other countries, and neither heard of nor saw Tom Smith until my return home, when I found him wandering about here, a gray-headed swearer and drunkard. He did not know me, and I never should have known him, had not some one told me who he was. And last night I received a letter from one of my nephews in the city, which informed me that Tom Smith had been tried in the court, and found guilty of stealing, and was sent to the state prison for ten years to hard work. There I suppose he will die, for he is now old; and it is awful to think of what is then to become of his soul. Ah, my dear boys! I could not help thinking, when I read my letter, of what that man said to me years ago—and I have told you this story, hoping that you will remember his words, 'Beware of the *first* drink.' The man who does that will never be a drunkard. And when old Uncle Philip is laid in the grave, boys, which must be before many years, remember, as you look upon the place, that he told you the story of Tom Smith, and charged you to 'beware of the *first* drink.'

'But here come some of the boys, running towards us: I suppose they have found something.'

'Oh, Uncle Philip! Uncle Philip! Do come with the boys this way. Under that fence yonder there are a great many beautiful wild flowers, and a number of bees are as busy as they can be about them: pray come and see them.'

'Well, I will; but not so fast, boys; you forget that I am an old man, and cannot run as you do.—So here are indeed, a great many industrious little workmen.'

'What are they doing, Uncle Philip?

'These are *workers* among the bees, and they are gathering the dust out of the flowers, to work it up into what is commonly called bee-bread. More tools here, boys!'

'Tools, Uncle Philip! Ah, we like that: pray let us hear of them; what are they?'

'Why, there is a brush and a basket in the legs of these little fellows; but they are so small that you cannot see them without a microscope.'

'What is a microscope?'

'It is an instrument, made by fixing glasses in such a way to look through, that small things seem to be very large. Do you not see how some of these little fellows are rolling themselves over in the inside of the flowers, so that the yellow dust is sticking to them? Now their breasts, and legs, and many other parts of their bodies, are covered with very short hairs, which catch the dust. The last joint but one of each leg is made exactly like a brush, the hairs being longer there than on any other part; and with these they brush off the dust, and get it into two little heaps. The bags into which they put it, or rather the baskets, are in the thighs of the last pair of legs. These are hollow, so as to form a three-sided basket. The bottom of it is smooth and shining, and appears like horn, and all around the edges are placed very strong, thick-set hairs, like bristles.'

'What are these for?'

'To keep things from falling out of the basket; and these bristles are so strong that even if they heap up more than the basket will hold, the bristles will keep it from falling. Besides carrying this dust, they also carry what is called *propolis*.'

'What is propolis, Uncle Philip?'

'It is a gum which is found upon some trees. This they work up into little balls, and knead it until it is a little dry, so as not to stick. This takes the bee sometimes as much as half an hour. When the balls are ready, she passes them backwards with her feet to the basket, puts them in, and gives them a pat or two to make them lie close; and when she adds more, she pats it still harder, and when the basket is full, away she goes to the hive. But there is another curious instrument about the bee. I mean its sting; this is like the head of a barbed or bearded arrow. There is a sheath for it when the bee does not wish to use it. But let us now continue our walk.'

'Well, Uncle Philip, it is really very pleasant to walk with you; it seems as if you met nothing which could not teach us things worth knowing.'

'Why, my dear boys, there are, as I told you once before, a great many things which I do not know; and what I do know I am very willing to tell you. But you may learn just as I did,—by reading, by taking notice of things around you, and by thinking for yourselves. And I do not know any thing more pleasant to notice than the works of God. I see his wisdom and his goodness in every thing which he has made. I see them in the insects, and the birds, and the larger animals; I see them in the grass, and the flowers, and the trees; and I see them in the rocks and the stones upon the ground. All these things are well worth our attention, boys; the study of all these things around us is called the study of 'Natural History;' and I think it is apt to make him who loves it a better man; at any rate, I believe that there have been very few who have not been amiable and benevolent men. But, hark! Do you hear that noise?'

'Yes, Uncle Philip; it is the sound of men chopping wood in that clump of trees.'

'No, boys; it is like the sound of a wood cutter; and it is a wood-cutter, but he does not use one of our hatchets.'

'What is it that he uses?'

'He uses the tool which God gave him. It is a bird, boys, which you hear; it is the woodpecker. See, there it is on yonder tree, and look, at the foot of it, there is something like a bushel of the bird's chips or dust. Its bill is a complete chisel; it is straight, hard, and sharp, with edges too upon the sides. It is not a very broad chisel, but still it is one, and used as we use ours. But the chisel is not the only instrument of that workman. Its tongue is worth examining. It bores a hole into a tree that is dead or decaying, to look for insects whose nests are in the tree; and when it reaches the cell where the young insect is, it uses its tongue to get it out, and it suits exactly for the business. In the first place, it is so long that the bird can shoot it out three or four inches longer than the bill is; in the next place the end of it is tipped with a stiff, sharp, long thorn; and in the last place, that thorn has little teeth on both sides of it, like that which you see on the point of a fish-hook: these teeth are to keep the insect from falling off when it puts its tongue in the hole and sticks its sharp point into it to draw it out for food. So that besides the chisel, the woodpecker has a spear, or lance, or arrow, barbed (as it is called) or bearded at the point.

'But we are some distance, boys, beyond the old mill: suppose we now turn back towards home; I find the gnats rather troublesome.'

'So do we, Uncle Philip; they have been biting us for some time; it would be well if there were no such tormenting things in the world.'

'I am not sure of that, boys. We may not always be able to find out the exact use of some of these little animals; but that only shows that we are ignorant, not that they are of no use. God would never have made them if he had not some wise purpose in doing so; I do not believe he ever wastes his power in making useless things. But what will you say about gnats, when I tell you that they have a tool to work with, and a very perfect one, too?'

'Why, we will almost forgive them for biting us.'

'Biting you! They have not been biting with teeth; they are doctors, boys; they have only been bleeding and cupping you.'

'And what have they been bleeding us with?'

'Why, with a lancet to be sure; what should a doctor use but a lancet to let blood?'

'And has the gnat really a lancet?'

'Yes, it has; this instrument forms a part of what you may call the tongue of the gnats: it is made up of five pieces, which are shut up in a case, split from one end to the other; these give steadiness to the lancet when it is used. But the reason of the pain is not so much the wound of the lancet, as it is the fluid or poisonous juice which the gnat puts into the wound to make the blood thin enough for the insect to suck it up through a tube or case, which makes part of its mouth.'

'We have now reached the bridge,—and here we must part; your homes are in one direction, and mine is in the opposite. I hope, however, that you have learned something in our morning walk.'

'We have, Uncle Philip, and we thank you much, and bid you, good day.'

'Good day, boys.'

GRATITUDE.

As the branches of a tree return their sap to the root from whence it arose; as a river poureth his streams to the sea, from whence his spring was supplied; so the heart of a grateful man delighteth in returning a benefit received.

He acknowledgeth his obligation with cheerfulness; he looketh on his benefactor with love and esteem.

And if to return it be not in his power, he nourisheth the memory of it in his breast with kindness; he forgetteth it not all the days of his life.

The hand of the generous man is like the clouds of heaven, which drop upon the earth fruits, herbage, and flowers; the heart of the ungrateful is like a desert of sand which swalloweth with greediness the showers that fall, but burieth them in its bosom, and produceth nothing.

Envy not thy benefactor, neither strive to conceal the benefit he hath conferred; for though to oblige is better than to be obliged, though the act of generosity commandeth admiration, yet the humility of gratitude toucheth the heart, and is amiable in the sight of both God and man.

But receive not a favor from the hand of the proud; to the selfish and avaricious, have no obligation; the vanity of pride shall expose thee to shame; the greediness of avarice shall never be satisfied.

CHARITY.

HAPPY is the man who hath sown in his breast the seeds of benevolence; the produce thereof shall be charity and love.

From the fountain of his heart shall rise rivers of goodness, and the streams shall overflow for the benefit of mankind.

He assisteth the poor in their trouble; he rejoiceth in furthering the prosperity of all men.

He censureth not his neighbor; he believeth not the tales of envy and malevolence, neither repeateth he their slanders.

He forgiveth the injuries of men—he wipeth them from his remembrance; revenge and malice have no place in his heart.

For evil he returneth not evil; he hateth not even his enemies; but requiteth their injustice with friendly admonition.

The griefs and anxieties of men excite his compassion; he endeavoreth to alleviate the weight of their misfortunes; and the pleasure of success rewardeth his labor.

He calmeth the fury, he healeth the quarrels of angry men; and preventeth the mischiefs of strife and animosity.

He promoteth in his neighborhood peace and good will; and his name is repeated with praise and benedictions.

MEDICAL LYCEUM.

THE 22d Medical District Society, met a few days since at Washington, Guernsey county, Ohio, and closed their concerns by making a donation of their funds to the American Colonization Society. They then organized a Society to be called the *Guernsey and Belmont Medical Lyceum*, and adjourned to meet in Middletown on the first Tuesday in October, where the physicians of the neighboring counties are invited to attend.—*Zainesville O. Gazette.*

INCOMBUSTIBLE WASH AND STUCCO WHITE WASH.

THE basis for both is lime—which must be first slacked with hot water, in a small tub or piggin, and covered to keep in the steam; it then should be passed, in a fluid form, through a fine seive, to obtain the flour of the lime. It must be put on with a painter's brush—two coats are best for outside work.

First, to make a fluid for the roof, and other parts of wooden houses, to render them incombustible, and coating for brick tile, stone work and rough cast, to render them impervious to the water, and give them a durable and handsome appearance. The proportions in each receipt are five gallons. Slack your lime as before directed, say six quarts, into which put one quart of clean rock salt, for each gallon of water, to be entirely dissolved by boiling, and skimmed clean; then add to the 5 gallons, 1lb, of alum, 1-2 lb, copperas, 3-4 lb of potash—the last, to be gradually added; 4 quarts of fine sand or hard wood-ashes must also be added; any coloring matter may be mixed, in such quantity as to give it the requisite shade. It will look better than paint, and be as lasting as slate.—It must be put on hot. Old shingles must be first cleaned with a stiff broom, when this may be applied. It will stop the small leaks—prevent moss from growing—render them incombustible, and last many years.

Second. To make a brilliant Stucco whitewash for the buildings inside and out. Take clean lumps of well burnt stone lime—slack the same as before; add 1-4 lb. whiting or burnt alum pulverized, 1 lb. loaf, or other sugar, 3 pints rice flour made into a very thin and well boiled paste, starch, or jelly, and 1 lb. clean glue, dissolved in the same manner as cabinet-makers do. This may be applied cold within doors but warm outside.—It will be more brilliant than Plaster of Paris, and retain its brilliancy for many years, say from 50 to a 100. It is superior, nothing equal. The east end of the President's House in Washington, is washed with it.

QUESTIONS

ON THE LAST NUMBER OF THE LYCEUM.

To whom are the Greenlanders indebted for civilization?

What method of adorning themselves is adopted by the Greenlanders?

Of what are their vessels formed? also, their fishing-lines?

What are the most important animals to the Laplanders? In what vehicles do they travel?

Where was Ledyard born, and with whom did he travel?

What passion did he exhibit in an eminent degree?

What were his qualities?

What example can be given of his powers of endurance?

In what capacity did he commence his travels?

Give some account of his notions before his starting for Africa?

What is the common length of a lion? Upon what does he live? Is his sense of hearing quick or dull?

What body has the greatest velocity?

What is the velocity of sound?

With what velocity has a cannon-ball been known to move?

What is pyrites composed of?

What is the chemical name of iron pyrites?

In the process of germination, does the radicle descend into the earth, or rise above its surface?

What part of a plant is formed from the plumula, the root or the trunk?

How many men is it supposed were employed, and for what length of time, in building the largest pyramid of Egypt?

How many different kinds of wasps are known, and what are the different modes of building their nests?

When was the horse first domesticated for the service of man?

Which was domesticated first, the horse, or animals used for food?

When was the horse first introduced in Egypt?

Was the horse used by the Israelites at the time of Saul? Where are horses mentioned in scripture?